

Notice of Allowability

Application No.

10/809,285

Examiner

Toan M. Le

Applicant(s)

ZADOR ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/28/07.
2. ☒ The allowed claim(s) is/are 1-53.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☒ to Paper No./Mail Date 8/31/06.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Allowable Subject Matter

Claims 1-53 are allowed.

Claims 1-53 are allowable over the prior art of record, none of the prior art whether together singularly or in combination as recited. The closest reference “A Maximum Likelihood Approach to Single-Channel Source Separation” by Jang et al. or reference “Blind Source Separation by Sparse Decomposition in a Signal Dictionary” by Zibulevsky et al. does not disclose or suggest the improvement of the instant application comprises providing a post-filtered dictionary including a set of filtered basis functions, wherein at least a portion of the filtered basis functions that form part of each source is included in the dictionary; estimating a value of at least one coefficient of each source using a composite signal and the dictionary; and reconstructing at least one source using the estimated value of the at least one coefficient as in claims 1 and 15, or providing a post-filtered signal dictionary that includes a set of filtered basis functions, wherein at least one of the filtered basis functions is derived from at least one directional filter that is head-related transfer function as in claims 7, 22, 49, and 50, or generating a signal dictionary through application of at least one directional filter, receiving a mixture of a plurality of sources including desired sources and undesired sources and separating the plurality of sources using elements of the dictionary and mixture as variable in a set of mathematical equations that estimate the value of unknown coefficients corresponding to each of the sources as in claims 28, 37, 39, 47, and 51-52, instead Jang et al. disclose a priori set of time-domain basis function learned by independent component analysis (ICA) to the separation of mixed source signals observed in a single channel by deriving a learning algorithm using a maximum

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likelihood approach given the observed single channel data and sets of basis function and Zibulevsky et al. disclose a priori selection of a possibly overcomplete signal dictionary in which the sources are assumed to be sparsely representable and then unmixing the sources by exploiting their sparse representability.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan M. Le whose telephone number is (571) 272-2276. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Toan Le

May 21, 2007



DONALD E. McELHENY, JR.
PRIMARY EXAMINER